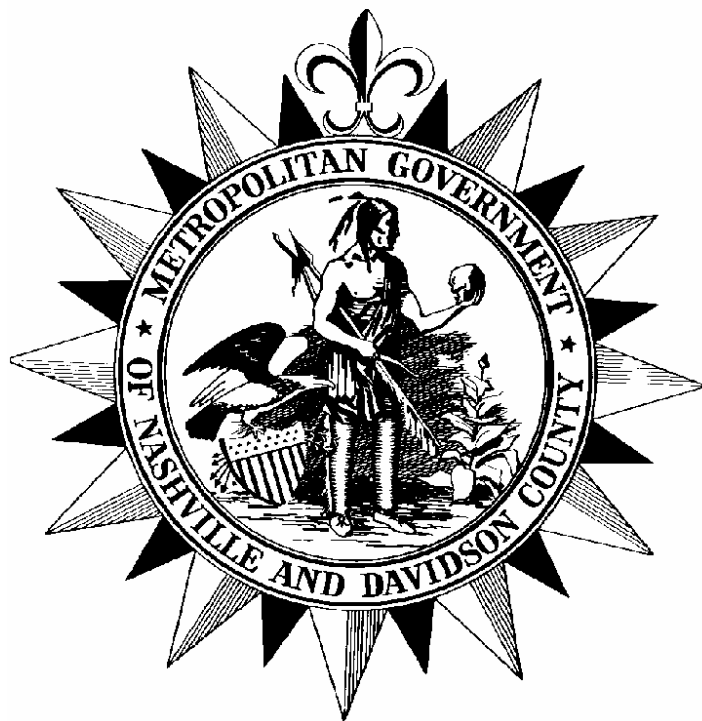


**Mid-Year Assessment
Of
2003 Ten Year Jail Population Projections
Criminal Justice Planning Unit**



Nashville – Davidson County

Tennessee

March 2004

The Mid-Year Assessment

The Criminal Justice Planning Unit annually projects the number of offenders anticipated to be incarcerated in Davidson County correctional facilities over the next 10 years. Starting in 2004 the projections will extend to the next 5 years. Currently these projections are developed starting in June of each year and the final report is presented to the Criminal Justice Steering Committee in September. The projections and the basic assumptions underlying the projections are later assessed at mid-year (March) for accuracy. The mid-year assessment determines if the actual incarcerated population differs from the projected population at a significant level. This report will then guide our efforts to explore the causes of significant discrepancies. The model is typically updated on an annual basis; however, in the future we may recast the model if the actual incarcerated population differs from the projected population by an average $\pm 4\%$.

Introduction

In September 2003, the Criminal Justice Planning Unit presented its inaugural set of projections of the Davidson County inmate population. The projections are based on known and assumed policies affecting admissions into the jail system and lengths of stay for current inmates. Three projections, referred to as low, baseline, and high, were calculated for this report.

Each projection uses different assumptions about future arrest rates and demographic trends in Davidson County. The Low projection estimates that future admissions into the jail system will increase at an average of 1.0% per year over the 10-year period. The Baseline projection estimates that future admissions into the jail system will increase at the annual rate of 1.9%. The High projection estimates that future jail admissions will increase at the rate of 2.8% per year.

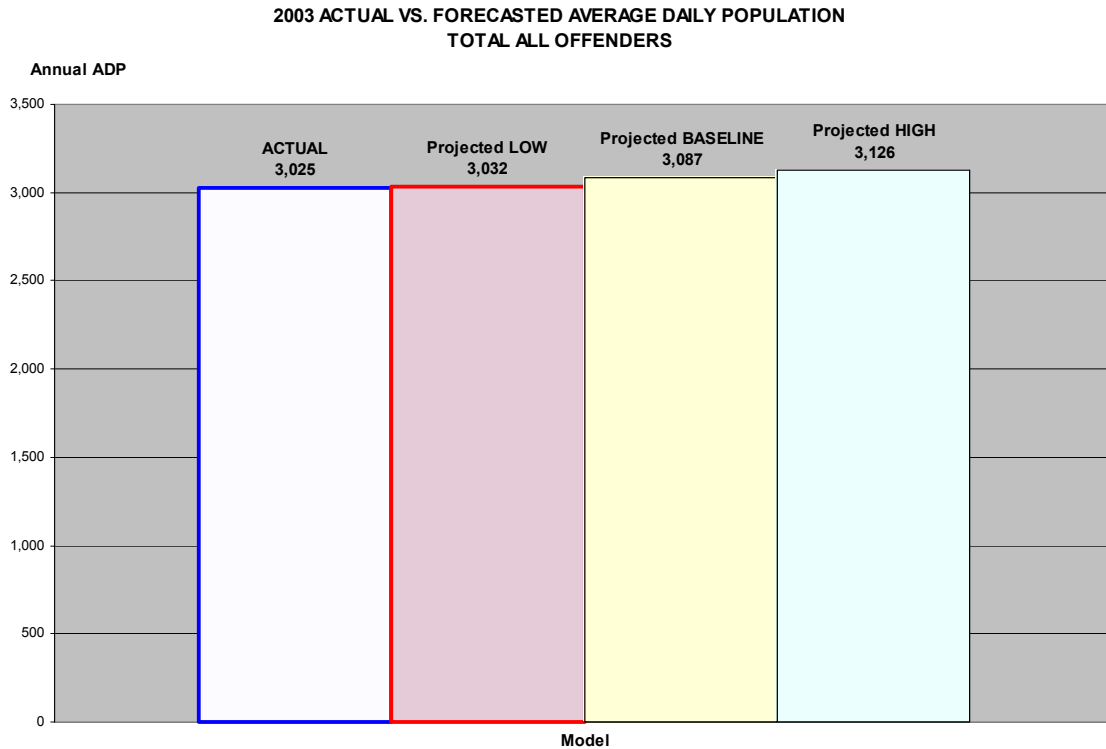
Results

This section presents an accuracy assessment of the September 2003 projection model. We compare the actual 2003 average daily population count to the forecasted estimates.

I. Average Daily Population -- Total for All Offenders

Figure 1 compares the actual 2003 average daily population of all offenders in the Davidson County correctional system with the forecasted projections. The actual average daily population of all offenders in 2003 was 3,025. We compared this against our baseline projection of 3,087. The resulting difference is an over-projection of 2.0%, or 62 offenders on an average day (Figure 1). An error of 2.0% is within a statistically acceptable range, according to the Institute on Crime, Justice, and Corrections, which developed the forecast model and acted as consultants to the Unit.

Figure 1



II. Average Daily Population – Breakdown by Offender Types

When we examine the model results for the various offender groups the results are mixed. Comparing the actual 2003 average daily population to the forecasted Baseline population yields the following error amounts. Locally Sentenced Felons were over-projected by 0.3% (3 offenders each day on average); State Sentenced Felons were over-projected by 14% (3 offenders per day); Pretrial Felons and Misdemeanants were off by 7% (73 offenders per day); Sentenced Misdemeanants and DUI's achieved an error of 3% (15 offenders per day), and the Other category (Probations violators and others) were under-projected by 12% (-32 offenders per day).

Conclusions

1. We achieved an overall error of 2% for the total offender population. Our results are within a statistically acceptable range. Errors ranged from 0.3% to 14% when comparing results for different offender groups.

2. We uncovered ways to improve the accuracy of the next release of the population projections. Areas we will research, explore, and enhance are:

A. Better estimation of seasonality of jail admissions -- In the next annual report we will use a longer historical period to estimate seasonality of admissions. We will also evaluate the use of smoothing techniques to eliminate extreme values and center the totals.

B. Better estimation of the actual average daily population -- Currently the practice is to base the average daily population on the count taken at 11:00 p.m. by Davidson County Sheriff's Office staff. We will assess the accuracy and feasibility of using different sources for the actual count. For example, using a count taken at another time of the day or an average of several daily counts may yield more representative totals to assess forecast error.

C. To improve the method of assigning legal status at admission and to more accurately estimate movement between legal statuses.